Title (en)

System and method for intelligent cruise control using standard engine control modes

Title (de)

System und Verfahren für eine intelligente Reisegeschwindigkeits-Steuerung unter Benützung von Standard-Motorsteuerungsmoden

Title (fr)

Système et méthode de commande intelligente de vitesse de croisière utilisant des modes de commande de moteur standard

Publication

EP 0729860 A3 19980415 (EN)

Application

EP 96102883 A 19960227

Priority

US 39664095 A 19950301

Abstract (en)

[origin: US6076622A] A method for implementing an intelligent cruise control using standard engine control modes includes determining the distance and closing rate relative to a forward object or vehicle and using this information to implement a distance control mode and a speed control mode. The distance control mode maintains a selectable headway range relative to a forward object or vehicle and may include accelerating the vehicle or decelerating the vehicle by defueling, engaging an engine brake, or downshifting the transmission when engine speed permits. The speed control mode maintains a selectable cruising speed if no target vehicle is detected. This cruising speed set point also functions as an upper limit while in the distance control mode. The system and method effect the intelligent cruise control functions utilizing control logic external to the electronic engine control module utilizing the engine speed control mode or engine speed and torque limiting control mode of SAE J1922 or SAE J1939 standards. Alternatively, a cruise control limit speed may be broadcast via SAE J1587 to reduce the vehicle speed upon approaching a forward vehicle so as to reduce the need for driver intervention. The invention may periodically switch between engine control modes to avoid any control mode timeout imposed by some engine manufacturers.

IPC 1-7

B60K 31/00

IPC 8 full level

B60K 31/00 (2006.01); **F02D 45/00** (2006.01); B60W 50/00 (2006.01); F16H 61/70 (2006.01); G01S 13/93 (2006.01)

CPC (source: EP KR US)

B60K 31/00 (2013.01 - KR); **B60K 31/0008** (2013.01 - EP US); **B60W 30/16** (2013.01 - EP US); B60W 2050/0045 (2013.01 - EP US); B60W 2710/0644 (2013.01 - EP US); B60W 2754/30 (2020.02 - EP US); B60Y 2200/14 (2013.01 - EP US); F16H 61/70 (2013.01 - EP US); F16H 61/702 (2013.01 - EP US); G01S 2013/9321 (2013.01 - EP US)

Citation (search report)

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DOCDB simple family (application)

US 6427898 A 19980422; AR 10151896 A 19960226; AU 4580596 A 19960228; BR 9600653 A 19960301; CA 2170658 A 19960229; EP 96102883 A 19960227; JP 4240496 A 19960229; KR 19960005373 A 19960229; MX 9600825 A 19960301; US 39664095 A 19950301; ZA 961560 A 19960227